
Graphical Displays

The individual graphical displays are the main graphical components of Call Tracking. Each graphical display highlights the Meridian 1's call records in a different statistical format. These windows and dialogs will continuously display your call record information. To edit the parameters and features of each graphical display, use their control-menu commands.

This chapter will describe the following graphical displays.

- System Times
- Recent Call History
- Current Call Information
- User Defined Speedometer
- Percent Calls by Duration Graph
- Call Origin Graph
- Call Origin Pie Chart
- Ring Time Meter

System Times

The System Times graphical display lists the current time (as recorded by the PC's internal clock). It also displays the date and time when you started collecting the call record information. Use this time as a reference for your data collection. Every time you start up the monitoring session, the start date and time will be reset.

Note: The time in this dialog is the PC time; not the Meridian 1 time.

Recent Call History

The Recent Call History dialog lists the details of the last 20 call records. Refer to this dialog to review the most recent call records. Each call record consists of the originating and terminating ID's (extensions or trunks), the date and time, duration, the digits dialed, and any authorization codes.

Figure 8
Recent Call History dialog

Recent Call History							
D0000224	T0000068	0814	0918	000130	0	00000	95551234
D0000224	T0000068	0814	0920	000007	0	00000	912145554432
D0000304	T0000070	0814	0920	000048	0	00000	912145551111
D0000204	T0000066	0814	0920	000118	0	00000	912145551111
D0000205	T0000074	0814	0921	000101	0	00000	912145551111

Longest Outgoing	00:18:18	Longest Tandem	00:03:01
Longest Incoming	00:10:32	Longest Internal	00:03:02
Total # of Calls : 33			

This dialog displays the total number of calls collected since the beginning of the session. It also lists the duration of the longest incoming, outgoing, tandem, and internal calls. To view these longest calls, click on the corresponding command button. This will access the Call Record Information dialog which lists the call's information.

Call Record Information

To view the information of a specific call record, double-click on the record line displaying the call record. The Call Record Information dialog will appear listing this call record's information in a readable format. It can also include the name of the employee linked to this extension. Exit from this dialog to resume viewing the Call History. When call records are being displayed at a high rate of speed (e.g., during file processing), it may be necessary to pause the display (using **Pause** from the File drop-down menu) to view this information more easily.

Current Call Information

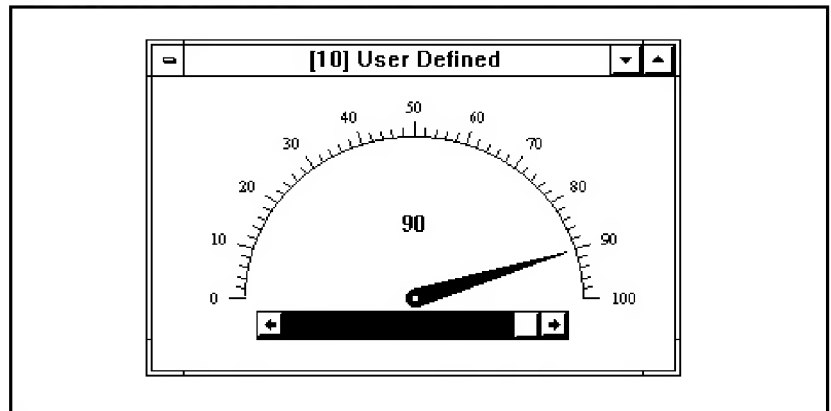
The Current Call Information graphical display lists the information of the most recent call. It includes such items as the start date and time, the originating and terminating ID, the call duration, and the digits dialed. If you enabled the **Additional Info** command from the Employee Database Options drop-down menu, then this window will also include the information of the employee sending or receiving this call.

As the calls are being collected, the Current Call Information window will change to reflect the most recent call.

User Defined Speedometer

The User Defined Speedometer is a speedometer-like analogue gauge (call meter) which displays user definable calling activity as a percentage value. This call meter represents the percentage of calls which meet the criteria specified for a sample size. It also contains an alarm function which will activate a predefined alarm when an alarm threshold is exceeded.

Figure 9
User Defined Speedometer



This call meter contains the following elements.

Title Bar: The title bar lists the title of the alarm for this call meter and the sample size of call records used in calculating the displayed percentage. This sample size represents the number of call records for which the graph's percentage calculation is based. For example, a sample size of 10 indicates that the graph calculates a percentage (of call records meeting the defined criteria) over the last 10 collected call records.

Call Meter: This speedometer-like gauge displays the percentage calculation for the collected call records over the sample size. This percentage value represents the total number of collected call records which meet the criteria entered in the Definitions function (following section) over the sample size. The number in this call meter is a numeric display of this percentage value.

Alarm Scroll Bar: This scroll bar is used to set the alarm threshold in the call meter for a defined alarm. You can only adjust this scroll bar if an alarm has been set and enabled using the Alarm Setting function (following section). Notice that as you drag the scroll bar left to right, the alarm threshold in the call meter (marked in red) will adjust accordingly.

Note: You must enable this alarm in the Alarm Setting function before the scroll bar becomes active.

User Defined Speedometer Alarm Setting

Use the Alarm Setting function to enable the alarm for the User Defined Speedometer and define the type of alarm which will be signaled. From this dialog, you can also enter the title which appears in the User Defined Speedometer dialog's title bar as well as its sample size.

Figure 10
Alarm Title & Information dialog

Alarm Title & Information

Description :

Sample Size :

Pager Code : 00004

☐ Enable

Alarm Mode

☐ Log File	☐ Network
☒ Visual	☐ Pager
☐ Audible	☐ Modem
☐ Printer	☐ Fax

To enter this information, click on **Alarm Setting** from the User Defined Speedometer control-menu. In the Alarm Title & Definition dialog which appears, enter the following information.

Description: In this field, enter a description of this alarm. This will appear on the User Defined Speedometer title bar.

Sample Size: In this field, enter the number of call records which will be used for this call meter (from 10 to 200). The call meter will display its percentage information for call records meeting the defined criteria versus this sample size. This value will appear on the User Defined Speedometer title bar.

Note: This call meter will not start displaying the percentage values until the total number of call records (i.e., sample size) have been collected.

For example, if you enter: **10** as the sample size and you define the call meter to list the percentage of call records exceeding 30 minutes in duration, then this call meter will view only the last 10 collected call records and calculate the total number of call records which exceed 30 minutes as a percentage of these 10 call records.

Pager Code: This is a read-only field which displays the predefined pager code for this type of alarm. If you select **Pager** as an alarm mode and this alarm is registered, then this number will be included in the pager display (along with the Call Tracking ID). This number represents the pager code for the User Defined Speedometer only.

Enable: Turn on (X) the Enable check box to enable this alarm. When the User Defined Speedometer gauge reaches the alarm threshold defined by the alarm scroll bar, the alarms selected from the Alarm Mode fields will be activated.

Alarm Mode: The Alarm Mode fields define which type of alarms will be activated once the alarm threshold is exceeded.

Turn on (X) the following Alarm Mode check boxes to activate the desired alarm mode:

Log File	Network
Visual	Pager
Audible	Modem
Printer	Fax

Once you have defined the alarms for this call meter, click on the **OK** command button to save it and return to the Call Tracking main window.

User Defined Speedometer Definition

The User Defined Speedometer Definition function allows you to set the filters for this call meter. The User Defined Speedometer will only register activity for calls which meet the criteria defined in these fields.

Figure 11
User Defined Speedometer Definition dialog

Call Meter Definition 1

☒ **Enable** Description : Sample Call Definition

Orig ID : ☐ And IDs Digits Dialed :

Term ID : Auth Code :

Date : Account Code :

Time : Calling Line ID :

Duration : 01:00:00 99:59:59 Ring Time :

OK **Prev**

Cancel **Next**

Help **Clear**

To enter the ranges for up to five different call meter settings, click on **Definition** from the User Defined Speedometer's control-menu. In the Call Meter Definition dialog for each setting, enter the following information.

Enable: To enable the current definition, turn on (X) the Enable check box. The call meter only calculates percentage values for ranges in definitions which have been enabled.

Description: In this field, enter this definition's description for informational purposes (maximum of 30 characters). This distinguishes this definition from the other definitions in this list.

Originating ID: In the Orig. ID fields, enter the range for the call records' originating ID's. Ensure that you enter the proper designators as the first characters in these ID's. Select the designators from the following: D = DN or extension, T = trunk, and A = attendant.

Terminating ID: In the Term ID fields, enter the range for the call records' terminating ID's. Ensure that you enter the proper designators as the first characters in these ID's. Select the designators from the following: D = DN or extension, T = trunk, and A = attendant.

And IDs: Turn on (X) the And IDs check box to include the ranges in both the Originating and Terminating ID fields in this definition. If you enable this feature, then only calls made from the extensions/trunks in the ranges of the Originating ID fields AND calls made to the extensions/trunks in the Terminating ID fields will be included.

Date: In these fields, enter the range for the call record date (mm/dd).

Time: In these fields, enter the range for the call record time in 24 hour format (hh:mm:ss).

Duration: In the Duration fields, enter the range for the call record's duration (hh:mm:ss).

Digits Dialed: In this field, enter the range for the digits dialed in the call record.

Authorization Code: In this field, enter the range for the call record's authorization code.

Account Code: In this field, enter the range for the call record's account code.

Calling Line ID: In this field, enter the range for the call record's calling line ID.

Ring Time: In this field, enter the range for the call record's ring time value (if applicable).

Once you have entered the criteria for the call meter, click on the **OK** command button to save it and exit to the Call Tracking main window. The system will prompt you with the message: **Reset current call meter percentage?** Click on the **Yes** command button to reset the call meter for the new criteria you have just entered.

If you wish to create other criteria for this speedometer, click on the **Previous** or **Next** command buttons and enter this information again. The title bar of this dialog lists the definition being edited. You can create up to five different definitions for this call meter.

Reset

To reset this call meter at any time during your session, click on **Reset** from the User Defined Speedometer control-menu. This will set the needle of the speedometer back to 0 and clear the total number of calls processed without stopping your session.

Note: The User Defined Speedometer must process the defined number of records (i.e., sample size) before becoming active after this reset.

Example setup

The following example setup demonstrates the use of the User Defined Speedometer.

Scenario

A user requires a call meter which displays activity on trunk-to-trunk calls. The office is not normally occupied on weekends, but occasionally a manager makes DISA calls in the evening and on weekends. The user does not want to be falsely notified for legitimate DISA use. There are no tie line to trunk calls or trunk to tie line calls on the Meridian 1. Therefore, any trunk-to-trunk calls are DISA calls.

The user wants pager notification when 25 out of 50 calls are trunk-to-trunk calls. Normal DISA use patterns indicate that no more than 20 DISA calls occur over any weekend. Therefore, they want to be notified on the 25th DISA occurrence in a sample of 50 calls (the trunk-to-trunk filter definition will be used to filter these "hits"). With this setup, an alarm notification will most likely indicate an actual toll fraud occurrence.

When an alarm is encountered, the system will send notification to a pager with the following parameters:

- Baud Rate: 9600
- Data Bits: 5
- Parity: None
- Stop Bits: 2
- Timing Parameter: 0
- Phone Number: 555-1234

Steps to defining the User Defined Speedometer

To define the User Defined Speedometer for this scenario, perform the following steps.

- 1 Enter the speedometer's criteria by clicking on **Definition** from the User Defined Speedometer control-menu. In the Call Meter Definition dialog which appears, enter the following information:

Enable check box: **(X)**

Description: **DISA Calls**

Orig ID fields: **T000000** to **T999999**

Term ID fields: **T000000** to **T999999**

And IDs check box: **(X)**

Leave the remaining fields blank and click on the **OK** command button to save this information and exit to the main window.

- 2 Enter the sample size, optional title, and alarm type for this speedometer by clicking on **Alarm Setting** from the User Defined Speedometer control-menu. In the Alarm Title & Information dialog which appears, enter the following information:

Description: **DISA Calls**

Sample Size: **50**

Enable check box: **(X)**

Alarm Mode Log File check box: **(X)**

Alarm Mode Pager check box: **(X)**

This will display the title 'DISA Calls' in this speedometer's title bar and will set the sample size to '50'. It will also enable an alarm message to be sent to a pager as well as a log file. Click on the **OK** command button to save these settings and exit to the main window.

- 3 Define the pager settings for this alarm by accessing the Pager Alarm Parameters function. Click on **Setup** from the Alarm drop-down menu and, from the Alarm Setup Information dialog which appears, click on the **Pager Alarm Parameters** command button.

In this dialog, enter the following information:

Script Name: **CMPAGER.SCR**

Baud Rate: **9600**

Data Bits: **5**

Parity: **None**

Stop Bits: **2**

Timing Parameter: **0**

Port: **COM2**

Phone Number: **555-1234**

Leave the remaining fields blank and click on the **OK** command button to save this information and return to the Alarm Setup dialog. Click on the **OK** command button again to save this setup and exit to the main window.

- 4 Before you attempt to use this alarm in a live test, you should test the pager first. To do so, display the User Defined Speedometer dialog entitled DISA Calls and click and drag the scroll bar to mark the alarm value. Notice that as you click and drag this scroll bar, the alarm setting (red colored bar) will appear on the call meter.

Test this alarm by moving the scroll bar so that just 1 or 2 “hits” in 50 will trigger the alarm (only some green will appear on the graph). Have a caller place some trunk-to-trunk calls through DISA in succession. When the alarm is activated, the pager should be signaled.

- 5 Once you have tested the pager, set up this alarm by clicking and dragging the User Defined Speedometer scroll bar so that the alarm setting is at 50%.

This completes the settings for this speedometer. When you start a live call monitoring session, this call meter will be updated as the matching call records are recorded. Once the first 50 call records (sample size) are recorded, the speedometer will display the percentage values for DISA calls being placed.

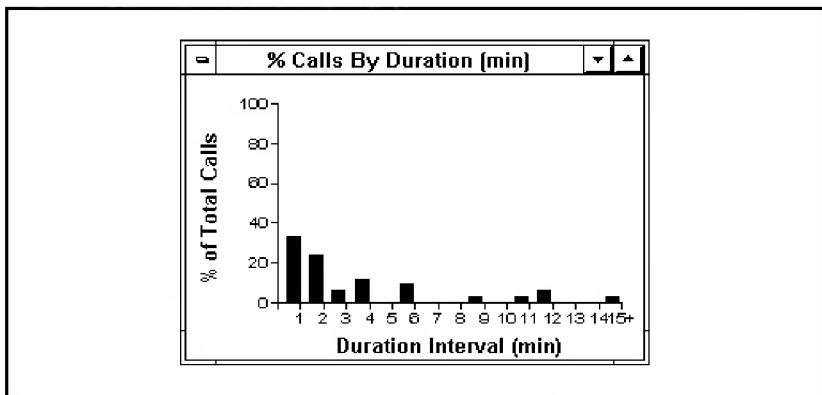
As Call Tracking collects call records, it will continue to display the percentage value of total calls meeting this criteria for the latest 50 call records. If the alarm threshold is exceeded, Call Tracking will send an alarm message to the defined pager. As well, it will enter the offending call record in the Call Tracking Alarm Log.

Percent Calls by Duration Graph

The Percent Calls by Duration Graph displays a percentage of the total calls separated into distinct time periods. Each item in the graph represents the percentage of total calls which have a duration within each time period and lists the total for each period as a percentage of the total calls. Use this graph to spot trends in call duration and gain an overview of your telephone system's usage. Select the intervals for this graph by selecting the total range from its control-menu.

The horizontal axis lists the calls by time units (i.e., 1, 2, or 4 minute intervals) and the vertical axis lists the percentage totals for each time interval. To change the time intervals (for the horizontal axis), click on its control-menu box and select either: **1**, **2**, or **4** minutes from this menu. The graph will be readjusted according to these time intervals.

Figure 12
Percent Calls by Duration Graph

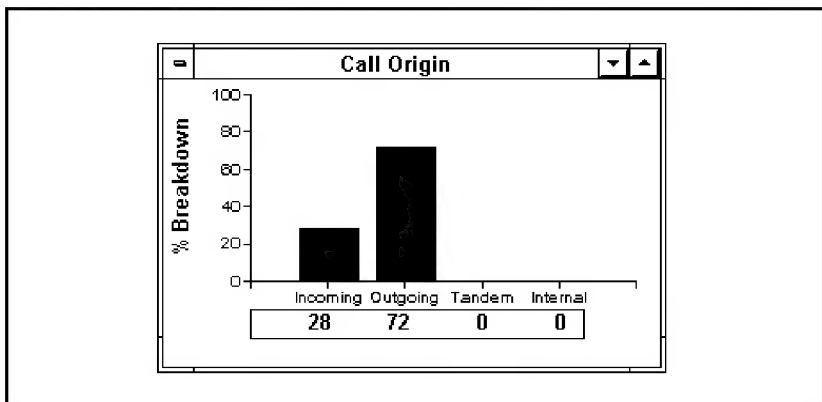


Call Origin Graph

The Call Origin Graph displays the total percentage of incoming, outgoing, tandem, and internal calls. The horizontal axis contains each type of call and the vertical axis lists their percentage values based on the total number of calls.

Use this graph to quickly identify the different types of calls being made in comparison to each other.

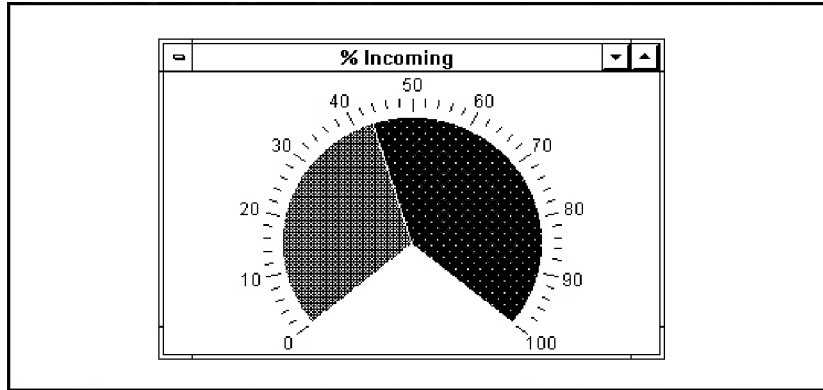
Figure 13
Call Origin Graph



Call Origin Pie Chart

The Call Origin Pie Chart displays the percentage of incoming, outgoing, tandem, and internal call records. This represents a different way of displaying a specific call type as shown in the Call Origin Graph. Select the type of call to be displayed from its control-menu.

Figure 14
Call Origin Pie Chart



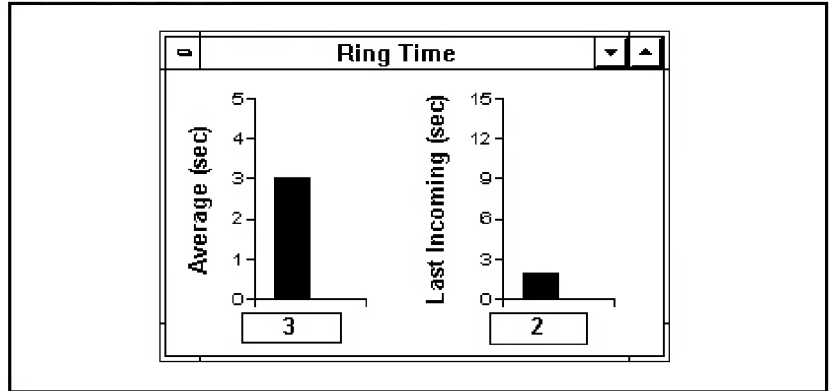
The title of this graphical display window will include the type of call marked by the call meter. For example, if the title is '% Outgoing' and the needle points to 50, then 50% of the total calls were outgoing.

When you start collecting call records, the call meter needle will begin to move reflecting the status of the calls.

Ring Time Meter

The Ring Time Meter window contains two graphs which display ring time information (time taken for an extension to ring before it is answered or disconnected). If your release of Meridian 1 supports ring time output, then this dialog will display this information.

Figure 15
Ring Time Meter



Average Ring Time Meter

The Average Ring Time Meter displays the average ring time (in seconds) of the incoming calls collected in this session. The scale of this graph will automatically be adjusted according to the average ring time and will appear next to it.

Last Incoming Call Meter

The Last Incoming Call Meter displays the ring time of the last incoming call (in seconds) as a graphical display and a numeric value. This display is set in a range from 0 to a value which you set. This gauge also includes an alarm threshold for the ring times. For example, if you set an alarm of 20, then the defined alarm will be set off every time a ring time of 20 seconds or longer is recorded.

Use the following commands to define this graph's features.

Alarm Setting Definition

To set a ring time in seconds at which the predefined alarm will register, click on the Ring Time Meter control-menu box and click on **Alarm Setting**. In the Ring Time Alarm Value dialog which appears, enter the following alarm parameters.

Alarm Value: In the first field of this dialog, enter the alarm threshold for this graph. This value will appear as a threshold line on the graph.

Pager Code: This is a read-only field which displays the pager code for this type of alarm. If you select **Pager** as an alarm mode and this alarm is triggered, then this number will be included in the pager display (along with the Call Tracking ID). The number in this field represents the pager code for the Last Incoming Call Meter alarm only.

Enable: Turn on (X) the Enable check box to enable this alarm.

Alarm Mode: The Alarm Mode fields define which type of alarm will be activated once the alarm threshold is exceeded. Turn on (X) the following Alarm Mode check boxes to activate the desired alarm mode:

Log File	Network
Visual	Pager
Audible	Modem
Printer	Fax

Once you have entered the alarm settings, click on the **OK** command button to save them and return to the main window.

Last Incoming Scale

To set the scale for this gauge, click on the Ring Time Meter control-menu box and click on **Last Incoming Scale**. In the edit box which appears, type in the scale for this gauge from 10 to 999 seconds and click on the **OK** command button. The gauge will then display the ring times with this scale (range from 0 to the value you entered in this editor). Calls exceeding this scale will be displayed as the maximum value.

Once you have entered an alarm value, then you can enable the alarm to warn you of calls which contain ring times equal to or greater than the ring time you entered in the alarm setting.